

REMARKS

Claims 1-22 are pending in this application. The independent claims in this application are claims 1, 7, 13, 14, 19. Claims 1, 7, 13, 14, 19 have been amended above. As to the amendment reciting “wherein the input sound may not be of voices”, see, e.g., Claim 7. As to the amendment reciting “provided that a head-mounted system comprising the bone conduction microphone is discreetly hidden”, see, e.g., Applicants’ specification at page 8, lines 5-11. As to new claims 21-22, see, e.g., Applicants’ specification at page 8, lines 12-13.

A check is attached to satisfy the fee for two additional dependent claims. If any shortage in fees is identified, the Commissioner is authorized to charge attorney’s deposit account 50-2041(Whitham, Curtis & Christofferson).

In the Office Action at paragraph 3, Claims 1-4 and 7 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Harif (US 6,820,056 a newly cited reference) in view of Norris (US 5,280,524) (a newly cited reference).¹ In the Office Action at paragraph 11, Claim 13 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Dahan in view of Norris.² In the Office Action at paragraph 16, Claims 14 and 19-20 have been rejected under 35 U.S.C. 103(a) as unpatentable over Kimura et al. in view of Norris.³

Applicant respectfully traverses all of the obviousness rejections.

In the presently claimed invention as set forth in the independent claims, a bone conduction microphone is used; “the input sound may not be of voices”; and, “a head-mounted system comprising the bone conduction microphone is discreetly hidden”. (Independent claims 1, 7, 13, 14, 19.) Examples of discrete hiding are

¹In the Office Action at paragraph 6, Claims 6 and 9-12 have been rejected under 35 U.S.C. 103(a) as being unpatentable over a combination of three references: Harif, Norris and Tognazzini. In the Office Action at paragraph 23, Claims 5 and 8 have been rejected under 35 U.S.C. 103(a) as unpatentable over three references: Harif, Norris and Oh et al.

²In the Office Action at paragraph 13, Claims 15 and 17 have been rejected under 35 U.S.C. 103(a) as being unpatentable over a combination of three references: Dahan, Norris and Tognazzini.

³In the Office Action at paragraph 20, Claims 16 and 18 have been rejected under 35 U.S.C. 103(a) as being unpatentable over a combination of three references: Kimura, Norris and Tognazzini.

hiding in side the user's ear and hiding in the user's hair. (Claims 21-22.)

The primary references are Harif (newly cited); Dahan and Kimura, none of which discloses a bone conduction microphone.

Harif discloses recognizing non-verbal sounds. However, Harif fails to disclosing prohibiting a verbal (voice) sound as an input. Harif also fails to disclose surreptitious, discrete placement of a head-mounted microphone.

Dahan is a speech-recognition system based on frequently occurring word sequences. Dahan gives examples of intended use for his invention: voice-activated dialing, credit card number identification, flight information. In Dahan, a normal telephone is used. Dahan's invention concerns how the input sound sent via a normal telephone is processed and matched. Dahan fails to disclose prohibiting a normal voice sound as an input and affirmatively uses a normal voice. Dahan also fails to disclose surreptitious, discrete placement of a head-mounted microphone.

Kimura relies on voice-operation (and not non-voice sounds) to run remote control systems. Kimura fails to disclose surreptitious, discrete placement of a head-mounted microphone.

The presently claimed invention provides unexpectedly superior results over any of the primary references (all of which lack the disclosure of a bone-conduction microphone). Namely, in the presently claimed invention, a user can surreptitiously and discretely activate a computer. In Harif or Kimura, for example, since voice-activation is needed, a user necessarily by using his voice would attract attention; moreover, the user in Kimura would be completely dependent on access to speak into a normal telephone in a normal voice, which is not required in Applicant's invention. Harif, Dahan, and Kimura each completely lack the property of permitting a user to surreptitiously and discretely activate a computer. That Applicant's presently claimed invention has this property of permitting a user to surreptitiously and discretely activate a computer is evidence of nonobviousness. MPEP 716.02(a). Accordingly, the obviousness rejections should be withdrawn for this reason.

The secondary references fail to supply what is missing from the primary references. As secondary references, the Examiner has cited Norris (newly cited); Tognazzini; and Oh et al. Only Norris teaches a bone conduction microphone.

Norris, which discloses a bone conductive ear microphone, fails to teach surreptitious, discrete placement. Norris also fails to teach that the input may not be a voice sound. Norris fails to teach using non-voice sound input. Norris relies on voice commands. (Col. 8, line 14+.) What Norris fails to teach may be understood and appreciated in context of what Norris teaches. Namely, Norris was providing an ear-mounted microphone “capable of isolating the voice of the speaker from all extraneous, background noise.” (Col. 3, lines 8-11.) Also, Norris was concerned with doing so while avoiding entry of a physical structure within the ear canal. (Col. 3, lines 11-15.) Norris is mainly concerned with establishing a hands-free system not having background noise problems so that a user may be mobile and may operate the system hands free so as to be able to simultaneously do other tasks and communicate with multiple parties. (Col. 8, lines 14-54.)

Tognazzini fails to teach a bone conduction microphone. Tognazzini discusses a system of identifying calendar schedule conflicts. Tognazzini fails to disclose prohibiting a normal voice sound as an input. Tognazzini also fails to disclose surreptitious, discrete placement of a head-mounted microphone.

The Oh patent has as its main objective a hands-free audio memo system, with the emphasis being on a hands-free feature, such as for use while driving an automobile. The Oh et al. patent fails to teach or disclose using a bone conduction microphone. Oh et al. rely on voice input at a sufficiently loud level to be picked up by a normal microphone. Oh et al. fail to disclose a user operating a computer surreptitiously, without using recognizable sound apparent to others in the vicinity. Oh et al. necessarily assumes that the sound emanated by the user is loud enough and recognizable enough to be input via a normal microphone at a distance from the speaker. In Oh et al., it is impossible for a user to surreptitiously and discretely activate a computer, because the user must speak loudly enough to activate the microphone at a distance from him.

No matter how all six of the references cited in the office action are combined, a person of ordinary skill in the art would still fail to arrive at the presently claimed invention, because there is lacking disclosure of surreptitiously head-mounting a bone conduction microphone system for computer operation based on only non-voice sound recognition input via the bone conduction microphone. Discretely using a head-mounted bone conduction microphone for

computer operation based on non-voice sound recognition is an invention by Applicant.

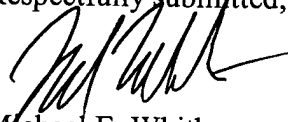
The reasons mentioned herein apply to all of the claims. For simplicity, additional arguments particular to certain dependent claims are not presented at this time. For the reasons more fully set forth above, reconsideration and withdrawal of the obviousness rejections are respectfully requested.

In view of the foregoing, it is respectfully requested that the application be reconsidered, that claims 1-22 be allowed, and that the application be passed to issue.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephone or personal interview.

A provisional petition is hereby made for any extension of time necessary for the continued pendency during the life of this application. Please charge any fees for such provisional petition and any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041 (Whitham, Curtis & Christofferson, P.C.)

Respectfully submitted,



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